

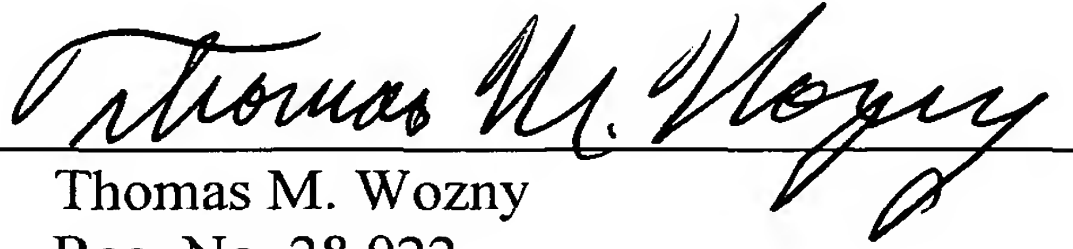
Markku Auer et al

Attorney Docket No.: 2534-00066

Examination of this application is requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADEApplicants: Markku Auer et alAttorney Docket No. 2534-00066IN THE SPECIFICATION:

The following heading and paragraph at page 1 have been added between the title and the first line of text as follows:

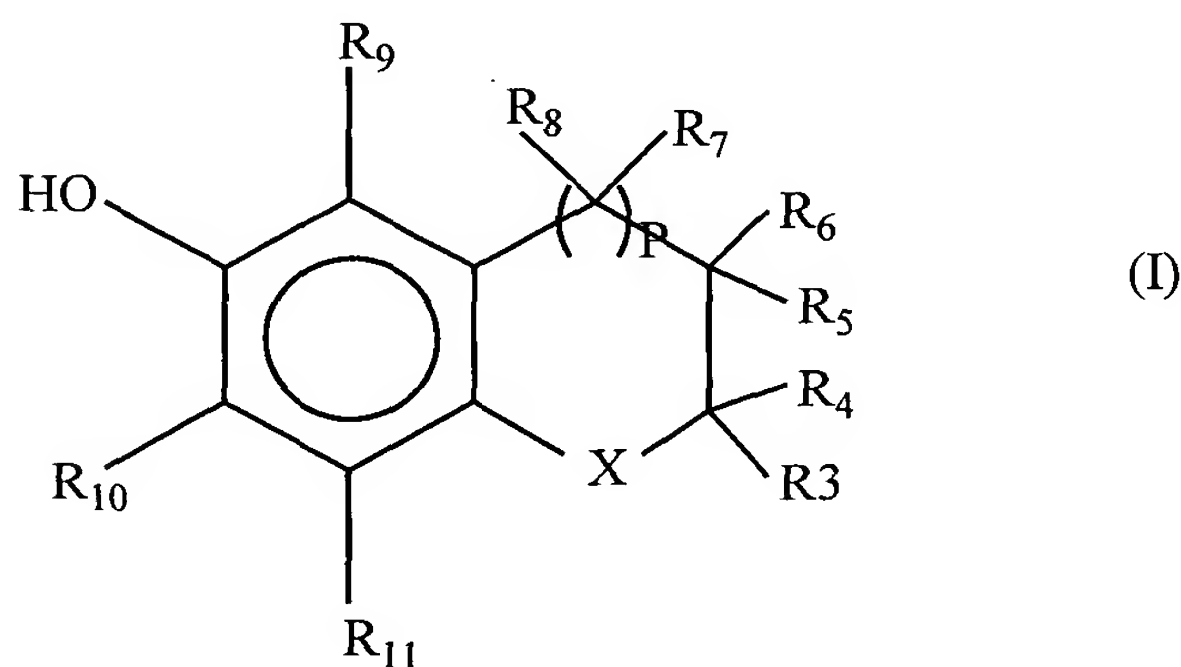
CROSS-REFERENCE TO RELATED APPLICATIONS

This application is the U.S. national stage application of International Application PCT/FI00/00585, filed June 28, 2000.

IN THE CLAIMS:

Claims 1, 4-14, 20-23, and 26-32 are amended as follows.

1. (Amended) E-vitamin derivative or a compound analogous with it, having the formula (I)



where X is an oxygen or sulfur atom, p is an integer 0 to 1, and R<sub>3</sub>-R<sub>11</sub> are identical or different groups selected from hydrogen, C<sub>1-6</sub>alkyl or α-alkene having the formula (II)



where n, m and o are integers 0-4 independent of each other and m+n+o is an integer 1-6 and R<sub>1</sub> and R<sub>2</sub> are identical or different groups selected from hydrogen or C<sub>1-6</sub>alkyl or C<sub>1-6</sub>alkene, which may be substituted with an aromatic ring,

or R<sub>7</sub> and R<sub>8</sub> are together an oxygen atom and/or R<sub>4</sub> and R<sub>5</sub> and/or R<sub>10</sub> and R<sub>11</sub> form together with the carbon atoms to which they are bonded a benzene ring, which may be substituted with groups selected from hydrogen, C<sub>1-6</sub>alkyl or  $\alpha$ -alkene.

4. (Amended) Derivative as defined in claim 1 ~~or 2~~, characterized in that one of groups R<sub>3</sub> and R<sub>4</sub> or one of groups R<sub>5</sub> and R<sub>6</sub> is hydrogen or a C<sub>1-6</sub>alkyl and the other an  $\alpha$ -alkene consistent with formula (II) and R<sub>7</sub>-R<sub>11</sub> are hydrogens or C<sub>1-6</sub>alkyls.

5. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 4~~ claim 1, characterized in that R<sub>1</sub> and R<sub>2</sub> are hydrogens.

6. (Amended) Derivative as defined in claim 1, ~~2 or 4 5~~, characterized in that it has formula (III), where X is oxygen, one of groups R<sub>3</sub> and R<sub>4</sub> is a methyl group and the other is an  $\alpha$ -alkene consistent with formula (II), where n+m+o equals 1 or 2 and R<sub>1</sub>-R<sub>2</sub> and R<sub>5</sub>-R<sub>6</sub> are hydrogens and R<sub>9</sub>-R<sub>11</sub> are methyl groups.

7. (Amended) Derivative as defined in claim 1, ~~2 or 4 5~~, characterized in that it has formula (IV), where X is oxygen, R<sub>1</sub>-R<sub>4</sub> are hydrogens, one of groups R<sub>5</sub> and R<sub>6</sub> is an  $\alpha$ -alkene consistent with formula (II), where n+m+o equals 4, and R<sub>9</sub>-R<sub>11</sub> are methyl groups.

8. (Amended) Derivative as defined in claim 1 ~~or 2~~, characterized in that one of groups R<sub>9</sub>-R<sub>11</sub> is an  $\alpha$ -alkene consistent with formula (II) and two of the groups are hydrogens or C<sub>1-6</sub>alkyls, and R<sub>3</sub>-R<sub>8</sub> are hydrogens or C<sub>1-6</sub>alkyls.

9. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 8~~ claim 1, characterized in that R<sub>10</sub> and R<sub>11</sub> are hydrogens or C<sub>1-6</sub>alkyls, R<sub>9</sub> is an  $\alpha$ -alkene

consistent with formula (II), where n is 0 or 1, m is 0 or 1 and o is an integer 1-4 and R<sub>1</sub>-R<sub>2</sub> are hydrogens or C<sub>1-6</sub>alkyls.

10. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 8-9~~ claim 1, characterized in that it has formula (III), X is oxygen, R<sub>1</sub>-R<sub>4</sub> and R<sub>10</sub>-R<sub>11</sub> are methyl groups, R<sub>5</sub>-R<sub>8</sub> are hydrogens and R<sub>9</sub> is an  $\alpha$ -alkene consistent with formula (II), where n is 0, m is 1 and o is 3.

11. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 8-9~~ claim 1, characterized in that it has formula (III), X is oxygen, R<sub>3</sub>-R<sub>4</sub> and R<sub>10</sub>-R<sub>11</sub> are methyl groups, R<sub>5</sub>-R<sub>8</sub> are hydrogens and R<sub>9</sub> is an  $\alpha$ -alkene consistent with formula (II), where m is 0 and o+n equals 1.

12. (Amended) Derivative as defined in ~~claim 1 or 3~~, characterized in that one of groups R<sub>9</sub>-R<sub>11</sub> is an  $\alpha$ -alkene consistent with formula (II) and the other groups are hydrogens or C<sub>1-6</sub>alkyls, and R<sub>3</sub>-R<sub>8</sub> are hydrogens or C<sub>1-6</sub>alkyls or R<sub>7</sub> and R<sub>8</sub> are together an oxygen atom and/or R<sub>4</sub> and R<sub>5</sub> form a benzene ring together with the carbon atoms to which they are bonded.

13. (Amended) Derivative as defined in ~~any one of claims 1, 3 or 12~~ claim 1, characterized in that R<sub>10</sub> is an  $\alpha$ -alkene consistent with formula (II) where n is 0 or 1, m is 0 or 1 and o is an integer 1-4 and R<sub>1</sub> and R<sub>2</sub> are methyl groups, R<sub>9</sub> is a C<sub>1-6</sub>alkyl, R<sub>11</sub> is a hydrogen, R<sub>7</sub> and R<sub>8</sub> are together an oxygen atom and R<sub>4</sub> and R<sub>5</sub>, together with the carbon atoms to which they are bonded, form a benzene ring.

14. (Amended) Derivative as defined in ~~any one of claims 1-13~~ claim 1, characterized in that it is 6-hydroxy-2,5,7,8-tetramethyl-2-(but-3-enyl)-chromane, 6-hydroxy-2,5,7,8-tetramethyl-2-(prop-2-enyl)-chromane, 6-hydroxy-2,2,7,8-tetramethyl-5-(1,1-dimethyl-hex-5-enyl)-chromane, 6-hydroxy-2,2,7,8-tetramethyl-5-(prop-2-enyl)-chromane, 5-hydroxy-4,6,7-trimethyl-3-(hex-5-enyl)-benzofurane or a hydroxythioxanthone derivative.

20. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-19~~ claim 17, characterized in that the olefin is ethylene, propylene, butylene and/or pentene.

21. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-20~~ claim 17, characterized in that the aromatic compound is styrene.

22. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-21~~ claim 17, characterized in that the copolymer consists of one olefin or styrene monomer and comonomer consistent with formula (III), (IV) or (V).

23. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-22~~ claim 17, characterized in that the copolymer has a substantially regular structure.

26. (Amended) Method as defined in claim 24 ~~or 25~~, characterized in that the copolymerization is performed using a metallocene catalyst or its derivative.

27. (Amended) Method as defined in ~~any one of claims 24-26~~ claim 24, characterized in that the catalyst used in copolymerization contains a  $\pi$ -cyclopentadienyl transition metal compound and an alumoxane compound.

28. (Amended) Method as defined in ~~any one of claims 24-27~~claim 24, characterized in that the catalyst used in copolymerization contains a  $\pi$ -cyclopentadienyl transition metal compound and a compound containing boron.

29. (Amended) Method as defined in ~~any one of claims 24-27~~claim 24, characterized in that the comonomer has been complexed to the catalyst.

30. (Amended) Method as defined in ~~any one of claims 24-29~~claim 24, characterized in that the olefin is ethylen, propylene, butylene and/or pentene.

31. (Amended) Method as defined in ~~any one of claims 24-30~~claim 24, characterized in that the aromatic compound is styrene.

32. (Amended) Method as defined in ~~any one of claims 24-31~~claim 24, characterized in that the amount of monomer and stabilizing comonomer supplied into the process is exactly defined.